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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,724	11/24/2003	Mitsuro Atobe	9319K-000606	2761
27572	7590	11/16/2005	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C.			DHINGRA, RAKESH KUMAR	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	
			1763	
DATE MAILED: 11/16/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/720,724	ATOBE ET AL.	
	Examiner	Art Unit	
	Rakesh K. Dhingra	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 1,2,6-12,14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 3-5 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/03,07/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of INVENTION OF Group II (Claims 3-5, 13) in the reply filed on 10/27/05 is acknowledged. The traversal is on the ground(s) that all groups of claims are sufficiently related to each other and undue burden would not be placed on the examiner by maintaining all groups in a single application. This is not found persuasive because the different inventions in this application pertain to different classes and sub-classes not co-extensive with each other as indicated in the Election/Restriction requirement, which would therefore result in serious burden on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

Accordingly, Claims 1,2, 6-12, 14, 15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Figures 1-8: none of the reference numbers as given in pages 15-31 of the specification are indicated in the drawings.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted

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after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

1) In this case the invention includes both apparatus and method and therefore the first line of abstract should include "apparatus and method" instead of "method" only.

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Oberg (US Patent No. 3,30,252).

Oberg teaches a deposition apparatus (Figures 1, 2) comprising:

a deposition mask 22 for attracting a subject 26 for deposition using electrostatic attraction and depositing a deposition material on the deposition subject in a predetermined pattern;

a crucible (evaporation source) 18 for evaporating the deposition material; and

a bell jar (vacuum chamber) 10,

wherein the mask and source are at least placed in the vacuum chamber (Column 2, lines 10-68).

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oberg (US Patent No. 3,330,252) in view of Lee et al (US PG Pub. No. 2003/0196680).

Oberg teaches a mask vapor deposition apparatus (Figures 1, 2) comprising:
an crucible (evaporation source) 18 for evaporating the deposition material; and
a bell jar (vacuum chamber) 10,
an electrostatic attraction mechanism (using voltage source 30) for maintaining the mask in a close relationship with the substrate,
a deposition mask 22 brought into close contact with bottom face of a substrate (deposition subject) 26 for depositing a deposition material in a predetermined pattern, the face being reverse to that of the substrate (deposition subject) 26 attracted by electrostatic attraction force between mask and substrate;
wherein the electrostatic attraction mechanism, mask, and crucible (evaporation source) are at least placed in the bell jar (vacuum chamber) 10 [Column 1, line 56 to Column 2, line 68].

Oberg does not explicitly teach electrostatic chucking mechanism for attracting the substrate by electrostatic chucking.

Lee et al teach a deposition apparatus (Figures 6A, 6B) that has a chamber body 610 that includes an electrostatic chuck 620 (Paragraph 0101).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use an electrostatic chuck as taught by Lee et al in the apparatus of Oberg to control deposition rate and uniformity of deposited film (Paragraph 0042).

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Claims 4, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oberg (US Patent No. 3,330,252) in view of Lee et al (US PG Pub. No. 2003/0196680) as applied to Claim 3 and further in view of Fujimori et al (JP Pub. No. 10-041069).

Regarding Claim 4: Oberg in view of Lee et al teach all limitations of the claim except ferromagnetic means for bringing mask and subject into close contact.

Fujimori et al teach an apparatus for manufacture of Electroluminescent display that ensures close contact between mask and substrate by using either mask or substrate or both made from magnetic material by producing pattern of an organic electroluminescent corresponding to the mask pattern (Abstract and Paragraphs 0028-0035).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use ferromagnetic means as taught by Fujimori et al in the apparatus of Oberg in view of Lee et al to increase adhesion between mask and the substrate (Paragraph 0029).

Regarding Claim 13: Oberg in view of Lee et al and Fujimori et al teach all limitations of the claim as explained above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1) Nishikawa (US Patent No. 6,852,356) teaches an evaporation apparatus (Figure 1) that includes a shadow mask 1 that is tightly placed to a glass substrate 130 by the magnetic power of a magnet 120 and where the mask is made of a magnetic material (Abstract and Column 5, lines 1-12).

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2) Chung (US Patent No. 6,869,636) teaches an apparatus (Figure 3A) for manufacture of organic electroluminescent displays that includes a mask 32 with plurality of pattern openings 33, a metal plate 30 and an evaporation source 34.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rakesh K. Dhingra whose telephone number is (571)-272-5959. The examiner can normally be reached on 8:30 -6:00 (Monday - Friday). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571)-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rakesh Dhingra



Parviz Hassanzadeh
Supervisory Patent Examiner
Art Unit 1763